DRILLING & COMPLETION HISTORY

CONSOLIDATED OIL & GAS, INC.

CHAMPLIN NO. 5-25

Rio Arriba County, New Mexico
August 7, 1963

Location:	1650' F/SL, 1850' F/WL, Section 25 T27N-R4W, NMPM
Elevations:	7314' GL 7326' KB - all measurements from KB
Spud:	May 28, 1963
Drilling Completed: Well Completed:	July 2, 1963 July 18, 1963
Total Depth:	6480'Drilled 6430'PBTD
Casing: Surface:	8 5/8" set at 284' with 175 sx regular 2% $CaCl_2$
Production:	5 1/2" 14#, 15.5# and 17# casing set at 6456' KB cemented with 216 sx 50-50 Pozmix thru casing shoe, and 216 sx thru stage collar at 4365'.
Tubing:	1 1/2" EUE set at 6210' in Baker Model "D" Packer 1" EUE set at 4066.46'
Logs:	Welex Gamma Ray - Neutron
Cores & Drillstem Tests:	None
Formation Tops(Log):	Ojo Alamos 3585' (+3714) Pictured Cliffs 4130' (+3196) Cliffhouse 5932' (+1374) Point Lookout 6310' (+1016)

Producing Perforations:

MV	PC
6316-6336	4154-4190
6364-6372	4202-4220
6378-6386	4267-4292
6392-6412	
6418-6428	

Treatment:	MV	Sand water frac with 100,000# sand, 88,000 gals water
	PC	Sand water frac with 100,000# sand, 97,000 gals water
Initial Potential:	MV	Flow volume thru 3/4" choke 4,433 MCFD
	PC	Flow volume thru 3/4" choke 433 MCFD CAOF - 490 MCFD

WELL: CHAMPLIN NO. 5-25

1650' F/SL, 1850' F/WL, Sec. 25, T27N-R4W

FIELD: Blanco Mesaverde, Tapicito Pictured Cliffs

COUNTY: Rio Arriba STATE: New Mexico

ELEVATIONS: 7314' GL

7326' KB

5/27/63

Rigging up rotary rig.

5/28/63

Drilling rat hole.

5/29/63

Drilled 296' 12 1/4" surface hole, ran 6 joints 8 5/8" surface casing for an overall of 285'. Set at 284' KB. Cemented with 175 sx. regular 2% calcium chloride. Plug down at 4 a.m. Good returns. Present operation waiting on cement and nippling up. Spudded in at 12 noon 5-28-63.

5/30/63

Depth 1319'. Drilled 1023' sand and shale. Mud weight 9.0, Visc. 34, water loss 8.4, 3/4° Dev. at 800'. Present operation making trip for Bit 2.

5/31/63

Depth 2300'. Drilled 981' sand and shale. Present operation making trip for Bit 3. Mud weight 8.9, Visc. 35, water loss 12. 3/4° Dev. at 1425'. 1° Dev. at 1800'. 3/4° Dev. at 2264'.

6/1/63

Depth 2722'. Drilled 422' sand and shale. Present operation tripping for Bit 5. Mud weight 9.2, Visc. 35, water loss 9.2, 3/4° Dev. at 2675'.

6/2/63

Depth 3225'. Drilled 503' sand and shale . Present operation drilling with Bit 6. Mud weight 9.2, Visc. 36, water loss 8.2

6/3/63

Depth 3690'. Drilled 465' sand and shale. Present operation drilling with Bit 8. Mud weight 9.2, Visc. 36, water loss 8.2

WELL: CHAMPLIN NO. 5-25

6/4/63

Depth 4032'. Drilled 342' sand and shale. Drilling with Bit 10. Mud weight 9.3, visc. 35, water loss 8.6. 1 3/4° dev. at 3760'.

6/5/63

Depth 4296'. Drilled 264' sand and shale. Drilling with Bit 11. Mud weight 8.8, visc. 40, water loss 9.6. 38% lost circulation material in mud system, 1° dev. at 4289'. Lost approximately 300 bbls mud at 4219', lost approximately 400 bbls at 4260'. Present operation drilling ahead with full returns.

6/6/63

Depth 4625'. Drilled 335' sand and shale. Present operation drilling with Bit 12. Mud weight 9.0, visc. 41, water loss 9.6, 30% lost circulation in mud system. Lost 100 bbls mud at 4541'.

6/7/63

Depth 4865'. Drilled 240' sand and shale. Present operation drilling with Bit 13. Mud weight 9, visc. 40, water loss 8.2. Have lost approximately 1000 bbls mud throughout last 24 hours.

6/8/63

Depth 5161'. Drilled 296' sand and shale. Present operation drilling with Bit 14. Lost approximately 200 bbls mud last 24 hours. 1 1/4° dev. at 4931'. Visc. 38, mud weight 9, water loss 8.2.

6/9/63

Depth 5269', drilled 108' sand ans shale. Present operation mixing lost curculation material. Down 6 hours past 24 hours mixing lost circulation material. Lost approximately 800 bbls fluid.

6/10/63

Started out of hole to run a salt gel squeeze. Still no circulation. Pipe was dragging some when leaving bottom - 5629'. Pipe freed up. Pulled up to 3700'. Pipe started dragging. Washed pipe on up to 2438'. Pipe stuck. Tried to circulate - can pump down drill pipe. Cannot circulate. Rigged up Dialog. Ran free point. Pipe stuck at 2100'. Could not get backed off. Came up hole and backed off at 1807'. Recovered two drill collars. Left 22 collars in hole. Picked up jars and bumper sub. Went in hole and circulated on top of fish. Screwed into fish. Cannot circulate. Can pump down drill pipe through stuck bit at 600#. Attempted to jar fish loose, could not get fish loose, backed off fish. Came out of hole, picked up 8 joints of 7 5/8" washover pipe. Started in hole. Hit bridge at 500'. Came back out of hole with washover pipe. Put on 7 7/8" bit. Went back in hole to top of fish at 1807'. Preparing to circulate and condition above fish.

WELL: CHAMPLIN NO. 5-25

6/11/63

Have made 2 trips with bit to knock out bridges at 500' and 1700'. Attempting to run 7 5/8" (8 joints) of washover pipe. Will not go below 505'. Laid 8 joints of 7 5/8" washover pipe down. Picked up 6 joints of 7 3/8" washover pipe. Pipe went to 943'. Having same trouble at 943' with 7 3/8" washover pipe as we were having with 7 5/8" at 500'. Mud weight 9, Visc. 192, water loss 8.

6/12/63

Top of fish 1807'. Present operation washing over at 1855'. Mud weight 8.9, Visc. 238, water loss 6.4. 22 1/2 hours reaming and conditioning hole. 1 1/4 hour washing over. Running 6 joints 180' of 7 3/8" washover pipe.

6/13/63

Washed over to 1958'. Backed off at 1965'. Recovered 5 drill collars. Present operation coming out of hole with drill collars. 17 collars still in hole. Mud weight 9, Visc. 175, water loss 6.

6/14/63

Washed over to 2112'. Came out of hole. Screwed into fish. Working pipe. Pipe parted 5 joints down. Went in with overshot - caught fish. Attempting to run free point. Could not get down. Backed one collar off, recovered same. Top of fish at 1995'. Went back in, screwed into fish. Present operation running Dialog clean out tool to attempt to clean out bridges and plugs in drill pipe.

6/15/63

Ran Dialog clean out tool. Cleaned out drill collars. Backed off at 2123'. Recovered 4 drill collars. Lacked 12 drill collars having all collars recovered. (Note, there are 3 more collars on top that are less than 6 1/2" in diameter. The next two collars down are 6.50" in diameter.) Picked up and ran 7 5/8" wash over pipe. Pipe stopped at 536'. Pulled out 7 5/8" washover pipe. Ran 7 3/8" washover pipe, washed over to 2158', pipe stopped at 2063' (47' above top of fish) Would not go. Pulled wash over pipe out of hole. Present operation going in hole with bit and string reamer to condition hole to top of fish. Mud weight 9.2, Visc. 180, water loss 6.2. No loss of mud.

6/16/63

Total depth 5269'. Top of fish 2123'. Reamed from 500' to 2123' (top of fish). Came out of hole with reamer. Picked up 5 joints 7 5/8" washover pipe - went to 700'. Came out of hole, lay down 3 joints 7 5/8" - ran 2 joints 7 5/8" wash over pipe to 900' and stopped. Lay down 1 joint 7 5/8" washover pipe. Ran 1 joint 7 5/8" washover pipe to 1400' and stopped. Came out of hole, ran bit to top of fish (2123'). Present operation conditioning mud, bring mud visc. from 180 visc. to 75 visc. Will try 2 joints 7 5/8" washover pipe. Mud weight 9.2, visc. 75, water loss 6.5. 1/32 wall cake.

WELL: CHAMPLIN NO. 5-25

6/17/63

Attempted to run 7 5/8" washover pipe. Pipe stopped at 1150'. Ordered Grant underreamer from Odessa. Reamer arrived at 3:30 this a. m. Present operation picking up Reamer. will ream 8" hole to top of fish 2123'.

6/18/63

Under reamer to top of fish at 2123'. Conditioned hole, came out of hole with reamer. Ran 8 joints 7 5/8" washover pipe. Pipe stopped at 1100'. Brought under reamer to Farmington to check out, found that reamer had wrong control sleeve, would not let cutters go out to over 7 5/8". Cut off sleeve and repaired reamer to where reamer would cut a 8 1/4" hole. Present operation, under reaming 8 1/4" hole at 750'. Mud weight 9, Visc 75, water loss 6.

6/19/63

Under reamed from 750' to top of fish - 2123'. Had 8 1/4" hole. Made trip at 1200' to check under reamer. Reamer okay. Still going out to pull guage of 8 1/4". After under reaming to top of fish, circulate and conditioning hole. Came out of hole with under reamer. Picked up 8 joints of 7 5/8" washover pipe. Pipe stopped at 800'. Laid 6 joints of washover pipe down. Ran to 800'. From 800' to 1600' had to rotate. From 1600' to 2093' pipe went very well. Present operation cleaning out 30' of cuttings on top of fish. Going very well. Mud weight 9, Visc. 85, water loss 6.2.

6/20/63

Cleaned out 30' of cuttings on top of fish - 2123'. Washed over to 2183'. Came out of hole, picked up 4 more joints of 7 5/8" washover pipe. Pipe stopped at 1200'. Would not go. Came out of hole with washover pipe. Ran bit to top of fish. Conditioned hole and mud adding 100 bbls oil to mud system. Came out of hole with Bit. Picked up 6 joints of 7 5/8" washover pipe. Going in hole breaking circulation every 300'. Went to 1750' and stopped. Present operation coming out of hole to stand back 3 joints of 7 5/8" washover pipe. Mud weight 8.8, Visc. 130, water loss 3.8, 1/32 cake, ph. 9.5, 14% oil in mud system.

6/21/63

Ran 3 joints 7 5/8" washover pipe. Washed over 3 drill collars. Came out of hole with washover pipe. Ran back with drill pipe and dialog circulating tool. Cleaned out collars. Ran dialog back off tool. Backed off 3 drill collars - top of fish at 2202'. Came out of hole - recovered 3 drill collars. Went back in with washover pipe - 3 joints. Pipe went good within ten feet of top of fish, 2192'. Washed 10' of cuttings off top of fish. Present operation washing over at 2252'. Mud weight 8.8, visc. 100, water loss 3.8, 14% oil in mud system. Have 9 drill collars in hole.

WELL: CHAMPLIN NO. 5-25

6/22/63

Washed over and recovered 5 drill collars. Present operation going in hole with 4 joints 7 3/8" washover pipe. Lack four 6 1/4" drill collars having fish out of hole. Mud weight 8.8, Visc. 96, water loss 4.4.

6/23/63

Went in with 7 3/8" washover pipe, washed over 4 collars. Collars fell loose. Came out of hole with washover pipe. Went back in with drill pipe, screwed into fish. Started out of hole with fish, got within 1000' of surface, lost fish. Fish fell back to bottom. Went back in with drill pipe. Could not get to fish because of bridges. Came out of hole with drill pipe. Put bit on. Cleaned out to top of fish (5089')(5209'). Preparing to come out of hole.

6/24/63

Came out of hole with drill pipe and bit. Went back in and screwed into fish. Came out of hole, recovered all fish. Laid down all washover pipe. Rearranged drill collars. Started back in hole. Present operation, washing down and conditioning hole at 5229', 40' off TD. Mud weight 8.8, Visc. 80, water loss 4.

6/25/63

Depth 5475'. Drilled 250' sand and shale. Drilling with Bit 20. 1 1/2° Dev. at 5400'. Visc. 75, mud weight 8.8, water loss 6.

6/26/63

Depth 5710'. Drilled 245' sand and shale. Present operation making trip for Bit 22. Mud weight 9, Visc. 75, water loss 4.

6/27/63

Depth 5884'. Drilled 183' sand and shale. Present operation drilling with Bit 23. Mud weight 8.9, water loss 6.4, 1/32 cake, ph. 8.9. No loss of mud in last 24 hours.

6/28/63

Depth 5966'. Drilled 82' sand and shale. Lost circulation. Pumped approximately 230 bbls in. Could not get returns. Came out of hole to take float out of bit. Went ahead and pumped approximately 300 bbls out of pit into hole in order to mix Ziagel. Hole would fill up but would not stay full. Preparing to spot 1,000 gals of Ziagel to squeeze. Present operation cleaning pits to mix Ziagel. When last circulation, mud weight 9.8, 38% lost circulation.

WELL: CHAMPLIN NO. 5-25

6/29/63

Depth 6015'. Drilled 50' sand and shale. Present operation drilling with Bit 22. Mud weight 9, visc. 75, water loss 8.2. Went to bottom with drill pipe and bit. Spotted 100 bbls Zeogel on bottom. Pulled 1365' of drill pipe. Squeezed 28 bbls of gel into zone 5996'. Let set 6:30 p.m. 6-28-63 to 12:30 a.m. 6-29-63. Cleaned out to 5966' with full returns and start drilling.

6/30/63

Depth 6188'. Drilled 171'. Present operation trip for bit 27. Mud weight 8.9, visc. 78, water loss 6.4. Lost 35 bbls mud at 6033'. No loss since this depth.

7/1/63

Depth 6374'. Drilled 186' sand and shale. Present operation making trip for Bit 28. 1° dev. at 6300'. Mud weight 9, visc. 76.

7/2/63

Present operation, logging. Drillers TD 6477 - Logger TD 6480. Logs went okay. 45' rat hole.

7/3/63

Finished logging. Ran drill pipe back in hole, came out laying down. Rigged up and ran 5 1/2" casing. Ran 61 joints of 5 1/2" 17# for a total of 1965.21. Ran 111 joints of 5 1/2" 15.5# for a total of 4364.31. Ran 4 joints of 5 1/2" 14# for a total of 124.76'. Total pipe, 176 joints (6454.28') set at 6456 KB. Ran guide shoe and stage collar set at 6428' KB. Stage collar set at 4365' KB. First stage cement: Ran 216 sx 50-50 Pozmix with 1/4 lb flow seal, plug down at 12:30 a.m. 7-3-63. Bumped plug with 1500#. Released pressure, float held. Good circulation throughout job. Second stage cement: Ran 216 sx 50-50 Pozmix. Bumped plug with 1500#. Released pressure, held okay. Plug down at 1:30 a.m. 7-3-63. Good circulation throughout job. Present operation tearing down rotary rig.

7/4/63

Moving out rotary rig.

7/5/63

Waiting on frac water and completion rig.

7/6/63

Waiting on completion rig.

7/7/63

Pumping frac water.

WELL: CHAMPLIN NO. 5-25

7/8/63

Waiting on completion rig.

7/9/63

Waiting on completion rig and frac water.

7/10/63

Waiting on completion rig and frac water. Now pumping frac water, have on hand approximately 2500 bbls.

7/11/63

Waiting on frac water.

7/12/63

Moved in completion rig. Rigged up, picked up 2 3/8" completion string, went to top of stage collar (4365'). Pressured up with rig pump to 1500#. Held okay. Present operation drilling on stage collar.

7/13/63

Waiting on frac water.

7/14/63

Waiting on frac water.

7/15/63

Present operation rigging up to run correlation log. Have plenty of frac water. Start up rig @ 7 a.m. 7-15-63. Plug back T.D. 6430'. Rig up Western Co. Ran correlation log. Perforated MV, 6428'-6418', 6412'-6392', 6386'-6378', 6372'-6364', 6336'-6316', all 2 per ft. First stage MV: 5 pumps:

Breakdown 1 pump, 1400# to 300#	Breakdown and fill 120 bbls
All pumps on, 1000#	Treatment fluid 88,000 gals
Maximum pressure 1400#	lbs of sand 100,000 20-40
Minimum pressure 900# treatment	Over flush 28 bbls
Average treatment pressure 1300#	Rubber balls 50
Final treatment pressure 1400#	Injection rate 55 BPM
Instant Shut in vacuum	Job complete @ 1:53 p.m.
5 min Shut in vacuum	

WELL: CHAMPLIN NO. 5-25

7/15/63 (con't)

Second stage PC. Set Baker plug @ 4320' KB. Perforated 1 per ft. 4292'-4267', 2 per ft. 4220'-4202', 1 per ft. 4190'-4154'. 5 pumps:

B.D. 1 pump, 900#	B. D. and fill 150 bbls
All pumps, 1400#	Treatment fluid 97,000 gals
Maximum pressure 2600#	lbs of sand 100,000# 20-40
Minimum pressure treatment 1800#	Over flush 12 bbls
Average treatment pressure 2200#	Rubber balls 60, 3 stages
Final treatment pressure 2400#	Injection rate 49.4 bbls per min.
Instant shut in 600#	Job complete @ 6:05 p.m. 7-15-63
5 min shut in 200#	

7/16/63

Present operation blowing well down at 2800'. Making lots of sand and water. No help from bottom.

7/17/63

Blew well on down to 4320' - plug. Blew and cleaned well. Gauged PC. Making 200 MCF, clear of water and sand. Drilled to top of plug. Water came in, pulled bit back up to 1800', blew back down to plug, 4320'. Gauged well, making 3,500 MCF. Clear of water. Still making lots of sand. Present operation drilling on bridge plug.

7/18/63

Model D packer set at 6210' KB. Present operation running 1 1/2" tubing. Ran Mesaverde string of 191 joints (6182.70') of 1 1/2" EUE tubing plus 22.56' 1 1/2" subs for total of 6205.56'. Set @ 6216.36 KB in Baker Model "D" packer with 9000' compression. String is bullplugged with a 4' perforated nipple 4' above bottom.

Ran Pictured Cliffs string of 126 joints (4055.46') of 1" EUE tubing set @ 4066.46 KB. Jet collars @ 3841' and 3358' KB.

7/20/63

Well shut in. Mesaverde 1075# tubing pressure, Pictured Cliffs tubing pressure 75, casing pressure 75. 17 hour shut in.

7/21/63

Shut in - no report.

WELL: CHAMPLIN NO. 5-25

7/22/63

Well shut in.

7/23/63

Well shut in

7/24/63

Well shut in

7/25/63

Ran 3 hour test on both zones. On MV through 3/4" choke, 305# with spray of water and oil. Final tubing pressure through 3/4" choke 20#, casing pressure 370#, light spray of water.

OPEN FLOW TEST DATA

DATE July 24, 1963

Operator: Consolidated Oil & Gas, Inc.		Lease: Champlin No. 5-25	
Location: 1650' FSL, 1850' SWL, Sec. 25, T27N, R4W		County: Rio Arriba	State: New Mexico
Formation: Mesaverde		Pool: Blanco	
Casing: Diameter: 5 1/2"	Set At: Feet: 6477'	Tubing: Diameter: 1 1/2" EUE	Set At: Feet: 6210
Pay Zone: From: 6316	To: 6428	Total Depth: 6480	
Stimulation Method: Sand Water Frac		Flow Through Casing	Flow Through Tubing: x

Choke Size, Inches: 0.75		Choke Constant: C: 14.1605			
Shut-in Pressure, Casing, PSIG	+ 12 = PSIA	Days Shut-in: 7	Shut-in Pressure, Tubing: 1166 PSIG	+ 12 = PSIA: 1178	
Flowing Pressure: P: 305 PSIG	+ 12 = PSIA: 317		Working Pressure: P_w PSIG	+ 12 = PSIA	
Temperature: T: 38 °F	n =		Fpv (From Tables): 1.044	Gravity: 0.7 (est)	

CHOKE VOLUME = Q = C x P_t x F_t x F_g x F_{pv}

Q = 14.1605 x 317 x 1.0218 x .9258 x 1.044 = 4,433 MCF/D

OPEN FLOW = Aof = Q $\left(\frac{P_c^2}{P_c^2 - P_w^2} \right)^n$

Aof = $\left(\quad \right)^n$ =

Aof = _____ MCF/D

TESTED BY Aubrey Prater

WITNESSED BY Clyde Phillips

W. H. Williams, Chief Engineer

OPEN FLOW TEST DATA

DATE July 24, 1963

Operator: Consolidated Oil & Gas, Inc.		Lease: Champlin No. 5-25	
Location: 1650' FSL, 1350' FWL, Sec. 25, T27N, R4W		County: Rio Arriba	State: New Mexico
Formation: Pictured Cliffs		Pool: Tapicito	
Casing: Diameter: 5 1/2"	Set At: Feet: 6477	Tubing: Diameter: 1"	Set At: Feet: 4066
Pay Zone: From: 4154	To: 4292	Total Depth: 6480	
Stimulation Method: Sand-Water frac		Flow Through Casing	Flow Through Tubing: x

Choke Size, Inches: 0.75		Choke Constant: C: 14.1605			
Shut-in Pressure, Casing, PSIG: 1029	+ 12 = PSIA: 1041	Days Shut-in: 7	Shut-in Pressure, Tubing: 1029 PSIG	+ 12 = PSIA: 1041	
Flowing Pressure: P: 20 PSIG	+ 12 = PSIA: 32		Working Pressure: P_w: 370 PSIG	+ 12 = PSIA: 382	
Temperature: T: 40° °F	n = 0.85		Fpv (From Tables): 1.013	Gravity: 0.7 (est)	

CHOKE VOLUME = Q = C x P_t x F_t x F_g x F_{pv}

Q = 14.1605 x 32 x 1.0198 x .9258 x 1.013 = 433 MCF/D

OPEN FLOW = Aof = Q $\left(\frac{P_c^2}{P_c^2 - P_w^2} \right)^n$

Aof = $\left(\frac{1041^2}{1041^2 - 382^2} \right)^n = \frac{1,083,681}{937,757} = 1.155^{.} = 1.132$

Aof = 490 MCF/D

TESTED BY Aubrey Prater

WITNESSED BY Clyde Phillips

W. H. Williams, Chief Engineer